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PATENT**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re the Application of: William T. Campbell, et al., Serial No.: 10/700,928 Filed: November 3, 2003 For: DUAL MODE DISPLAY WITH A BACKLIGHT FILTER FOR AN UNACTIVATED LIGHT EMITTING DIODE (LED)	Art Unit: 2875 Examiner: Adam C. Rehm
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AFFIDAVIT OF RANDY MANER

1. My name is Randy Maner, and I am one of the inventors in the above-referenced patent application.
2. I have been in the Aerospace industry for over 19 years. I received a Bachelors of Science Electrical Engineering from New Mexico State University in December 1985. I have 19+ years experience as displays engineer at Sperry and Honeywell International, Inc. Currently I am involved in NVIS filter design for AMOLED displays, re-evaluation of NVIS requirements for United States Display Consortium, evaluation of transfective displays for military applications, low cost NVIS filter development, measurement tolerance analysis for NVIS filters, providing support for Honeywell commercial NVIS compatible display designs
3. I am an inventor in three patents related to the present patent application: US Patent No. 6,211, 934, entitled Method and Apparatus for Reducing Infrared Loading on Display Devices; US Patent 5, 600,432 entitled Method and apparatus for Measurement of Resolution of Imaging Systems; US Patent No. 5, 526,113 entitled Method and Apparatus for measurement of Spatial Signal and noise Power of Imaging Systems. In addition I have published several papers related to the subject matter of the present patent application, including numerous technical papers provided to customers on NVIS, military displays and characterization and design.

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4. I am a primary engineer for Multiple Military Display Backlight Designs (F-18 8x10 Dual Mode NVIS Backlight CCFL and HCFL, Crusader Gen II 8x10 Direct View Array White LEDs, C-5 6x8 MFDU Dual Mode NVIS LED and HCFL, F-18 5x5 AMPD/AMPCD/T50 Single HCFL NVIS, Crusader Gen I Dual Mode NVIS CCFL, V-22 RFIS/FDP Dual Mode NVIS Green A). I have also provided technical assistance for Multiple Military Display Backlight Designs (F-16 4x4 Dual Mode NVIS Backlight CCFL and HCFL, V-22 DU Single HCFL NVIS, CH-47 Single HCFL NVIS).

5. Due to my education and experience, I consider myself an expert in the art for the subject matter in the pending patent application.

6. I have reviewed the office action regarding the pending patent application dated May 17, 2005 as well as the cited prior art.

7. Johnson teaches the prior art method as specifically described in the Background Art Section of the present patent application beginning on page 2, line 1. The purpose of the normal mode lighting system described by Johnson is to be "utilized during daylight operation or night operations when the NVIS goggles are not being used" (reference Column 3 Lines 6 thru 8). Illumination from the normal mode lighting source (120) described by Johnson passes forward through several optical elements (172, 170, 174, 180, 190, and 100) before exiting to the viewer of the display. None of these optical elements as described by Johnson preferentially attenuates the near infrared portion of the spectrum while transmitting the visible portion of the spectrum as does an appropriately designed NVIS filter or hot mirror filter or notch filter. Consequently, any secondary emissions from the normal mode lighting system (120) caused by illumination from his NVIS light sources (140 & 150) would not be properly filtered to permit operation with NVIS goggles.

Johnson further describes the use of a second mode of operation for NVIS (reference Column 4 Lines 19 thru 34). During this mode of operation the normal mode lighting system (120) is turned off. Johnson does not describe the interaction between the

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illumination sources used for the two modes of operation. Further, Johnson does not describe the influence of the NVIS filtered light, which passes through the NVIS filter (160) from the NVIS light sources (140 & 150) on the normal mode lighting system. In particular, Johnson fails to discuss the phosphorescence, which occurs when the inactivated normal mode lighting source (120) is illuminated by the NVIS light sources (140 & 150).

Johnson does not describe the effect of the NVIS filter (160) when the normal mode lighting system is active. Johnson only describes the lack of influence the NVIS filter has during normal mode operation (reference Column 4 Lines 15 thru 18). A single NVIS filter (160) is the only element Johnson describes as providing spectral filtering necessary to achieve NVIS compliance. In the present claims, two distinct filters are claimed, an NVIS filter adjacent to said at least one first illumination source and a filter means adjacent to said at least one second illumination source for suppressing an excitation of said at least one second illumination source caused by said at least one first illumination source. Both of these filters, in combination, are necessary to achieve the NVIS performance requirements in the dual mode lighting system. Johnson does not teach or imply using a second filter to suppress the excitation on a first light by a second light.

In the office action, the Examiner speculated that the "light produced by the second illumination source would then be suppressed and otherwise contained within unit 100 by use of the NVIS filter 160". This statement is absolutely incorrect. Johnson provides no optical filtering in his invention to address the secondary or phosphorescence emissions from his primary lighting system as specifically claimed in the present invention. The single NVIS filter of Johnson will not filter the secondary or phosphorescence emissions from his primary lighting system. There is absolutely no teachings concerning this feature mentioned or implied in Johnson. The present claims call for an NVIS filter and also a second filter to accomplish this purpose, which are not contained in Johnson.

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8. I am familiar with several publications and other experts in similar art areas, and they would also vigorously disagree with the contentions made by the Examiner.

Further, Affiant sayeth naught.

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO)

IN TESTIMONY WHEREOF, Randy Maner has hereunto set his hand this 9th day of August, 2005.

SIGNATURE: Randy Maner

SUBSCRIBED AND SWORN to before me this 9th day of August 2005, by Randy Maner.

Virginia L. Larsen
NOTARY PUBLIC

My Commission Expires: 04/22/2008

